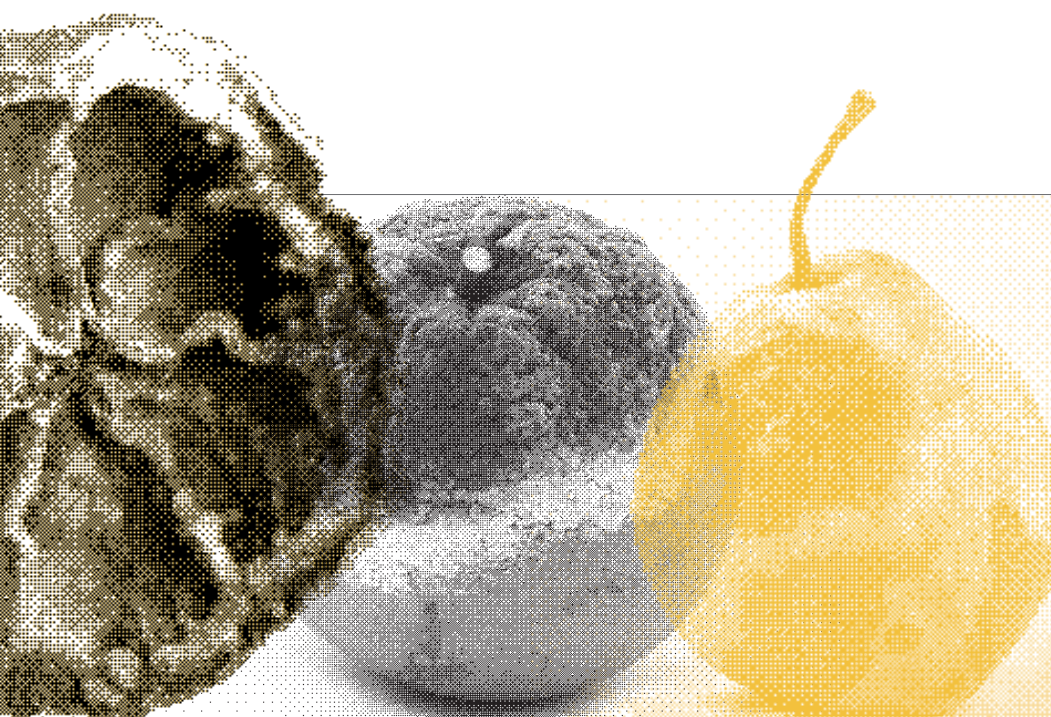




INVESTING IN FOOD LOSS AND WASTE WHAT'S IN IT FOR DEVELOPMENT BANKS?



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Food loss and waste (FLW) is costly for people, the environment and economies, particularly during a time of global uncertainty. In 2019, an FAO study found that around 14 percent of the food produced globally was lost during the post-harvest production stage before reaching the retail stage (FAO, 2019a). Using older estimates, which include all value chain stages up to household consumption, approximately one-third of all food produced for humans each year is wasted or lost. This represents around 1.3 billion tonnes of food, worth a total of nearly USD 1 trillion (FAO 2019a and 2016). The global environmental footprint of FLW is about 7 percent of global greenhouse gas (GHG) emissions and 6 percent of global freshwater withdrawals.

Tackling FLW is gaining momentum, with large companies and the private sector setting targets and implementing FLW programs. Businesses are also partnering through FLW networks and coalitions. While private sector responses show promise, their full potential will only be realised if the right public sector interventions are in place to remove critical barriers which prevent producers and consumers from reducing FLW.

Development banks have stepped up efforts to fight FLW within the last decade. However, the size and modality of support provided varies, as does the division and group of people within each institution with responsibility for FLW. In order to achieve the Sustainable Development Goals (SDGs), and to achieve the ambition of a more circular economy, support for tackling FLW needs to keep up with the rapid growth in technologies and financial instruments available.

This Investment Brief summarizes the challenge of FLW. It focuses on identifying action areas for development banks to meet this challenge. Potential action areas include assistance during the COVID-19 pandemic, and data collection and analytics, as well as direct country-level interventions, with a food systems approach. The brief explores options to attract private sector investment, including through a dedicated blended finance facility and institutional solutions within development banks, to create broad-based support for FLW reduction.

Almost one and a half billion hectares lost

The COVID-19 pandemic shone a spotlight on key issues within the global food system – notably FLW (Torero, 2020). Diverse problems, from trade-related measures to labour shortages and changes in consumer demand, can disrupt food supply chains and magnify FLW problems. For example, blocking the movement of food products or extending border delays results in the spoilage of food perishables and waste. For producers, restrictions and disruptions in food supply chains mean that they are unable to sell their produce, which can increase post-harvest losses and decrease incomes. As food insecurity fears grow, panic buying in supermarkets and stockpiling of food can create food shortages, while also leading to higher levels of food waste due to misunderstanding of date marking and improper storage (Rolle, 2020).

The global FLW situation was critical, even before the COVID-19 pandemic. In 2019, 14 percent of the food produced globally was lost during the post-harvest

production stage before reaching the retail stage (FAO, 2019a). At the regional level, food losses before retail range from 5–6 percent in Australia and New Zealand to 20–21 percent in Central and South Asia (Figure 1). Food waste at the retail level is also high, with estimates suggesting that between 10–28 percent of food produced for human consumption is wasted at retail level in high income countries (Buzby and Heyman, 2012). At the consumption level, food waste is very high, especially in high income countries: every year, consumers in Europe and North America waste almost as much food (222 million tonnes) as the entire net food production of sub-Saharan Africa (230 million tonnes) (FAO, 2019b). In a world where between 720 and 811 million people faced hunger in 2020 (FAO *et al*, 2021) and where agriculture puts significant pressure on natural resources, FLW is not only morally objectionable, but also economically and environmentally counterproductive.

APPROXIMATELY 14 PERCENT OF THE FOOD PRODUCED GLOBALLY IS LOST

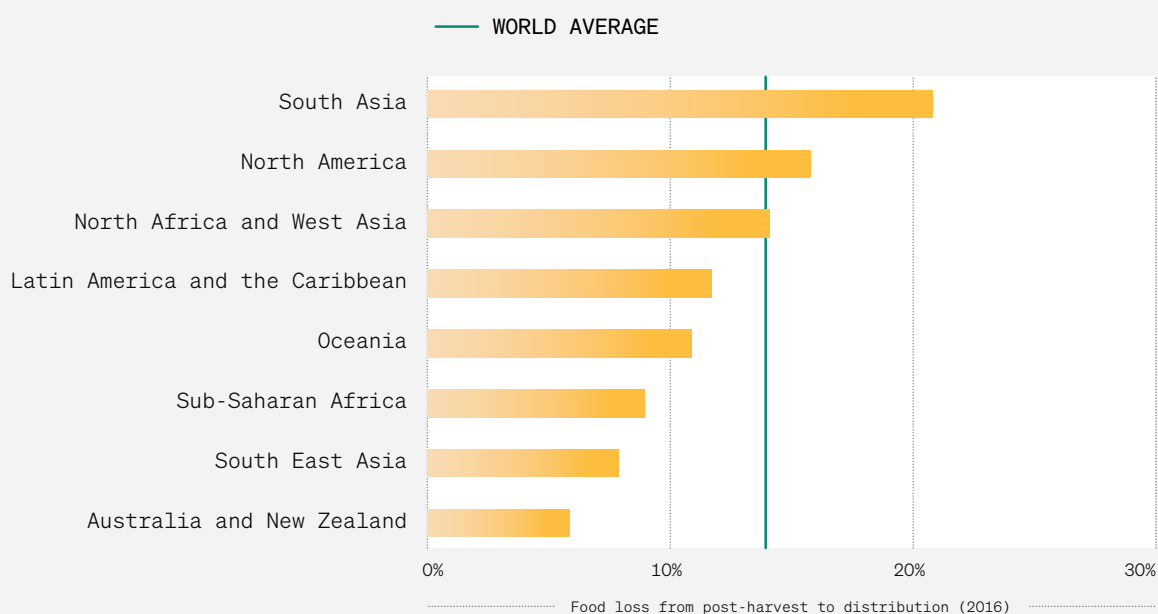


Figure 1
Approximately 14 percent of the food produced globally is lost

NOTE: Percentage of food loss refers to the physical quantity lost for different commodities divided by the amount produced. An economic weight is used to aggregate percentages at regional or commodity group levels, so that higher-value commodities carry more weight in loss estimation than lower-value ones.

SOURCE: FAO, 2019a. The State of Food and Agriculture 2019. Moving forward on FLW reduction.



The COVID-19 pandemic provided a strong rationale for investments in FLW reduction, such as improving storage facilities and equipment to reduce post-harvest crop losses, and resolving logistics bottlenecks. Over the longer term, addressing FLW is key to achieve the Sustainable Development Goals (SDGs) and the Paris Accord on climate change. At the COP26 event in Glasgow, civil society, government representatives and corporations restated the importance and opportunities in tackling FLW. The world's FLW reduction ambitions are enshrined within SDG 12 (responsible consumption and production) – particularly in

SDG 12.3, which calls for halving per capita global food waste at retail and consumer levels and reducing food loss along production and supply chains, including post-harvest loss, by 2030. Beyond SDG 12.3, reducing FLW also has implications for SDG 2 (zero hunger), SDG 6 (clean water and sanitation), and SDG 13 (climate change) among others. Incredibly, if FLW were a country, it would be the world's third largest GHG emitter (Figure 2). Given this vast carbon footprint (CFP), FLW reductions can make enormous contributions to 'greening' the agrifood sector.

GHG EMISSIONS

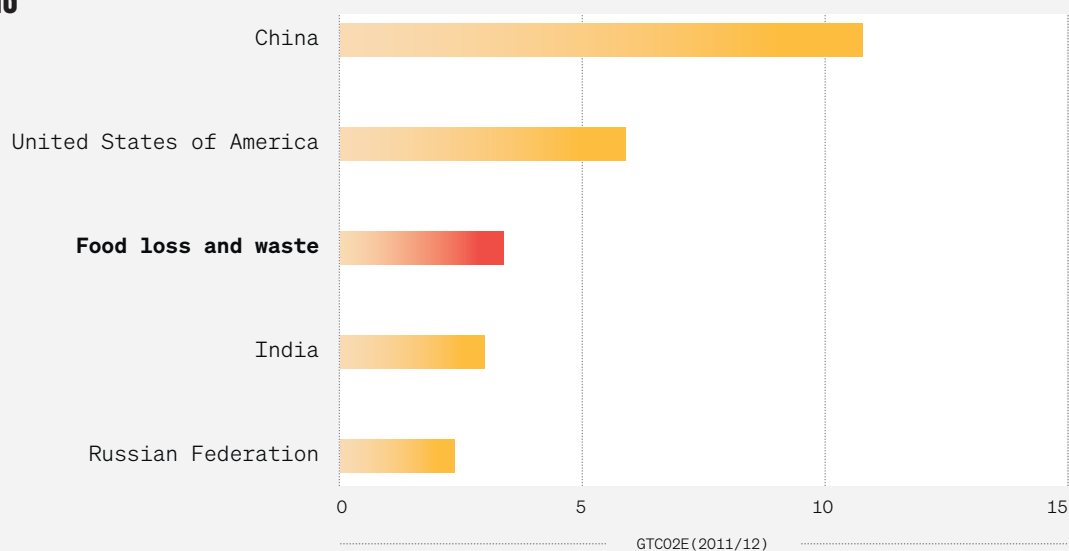


Figure 2
GHG emissions per country relative to FLW GHG emissions

SOURCE: Data for FLW from FAO. 2019. The State of Food and Agriculture 2019. Moving forward on FLW reduction. Rome. (pg. 92). All other data from FAO (2015) Food wastage footprint and climate change. Rome: FAO. Note: Figure reflects all six anthropogenic greenhouse gas emissions, including those from land use, land-use change and forestry. Country data is for 2012 while FLW data is for 2011.

The evolving food loss and waste response

The FLW landscape is heterogeneous, encompassing consumers, smallholder farmers and multinational food companies. In addition, governments play a critical role in creating appropriate incentives for FLW reduction. International development organizations and development banks in particular are key enablers of innovation and

finance, alongside civil society, governments and the private sector. Figure 3 highlights the causes and different drivers of FLW. Reducing FLW at scale requires the involvement of many actors in food systems and the implementation of context-specific interventions.

DRIVERS OF FLW

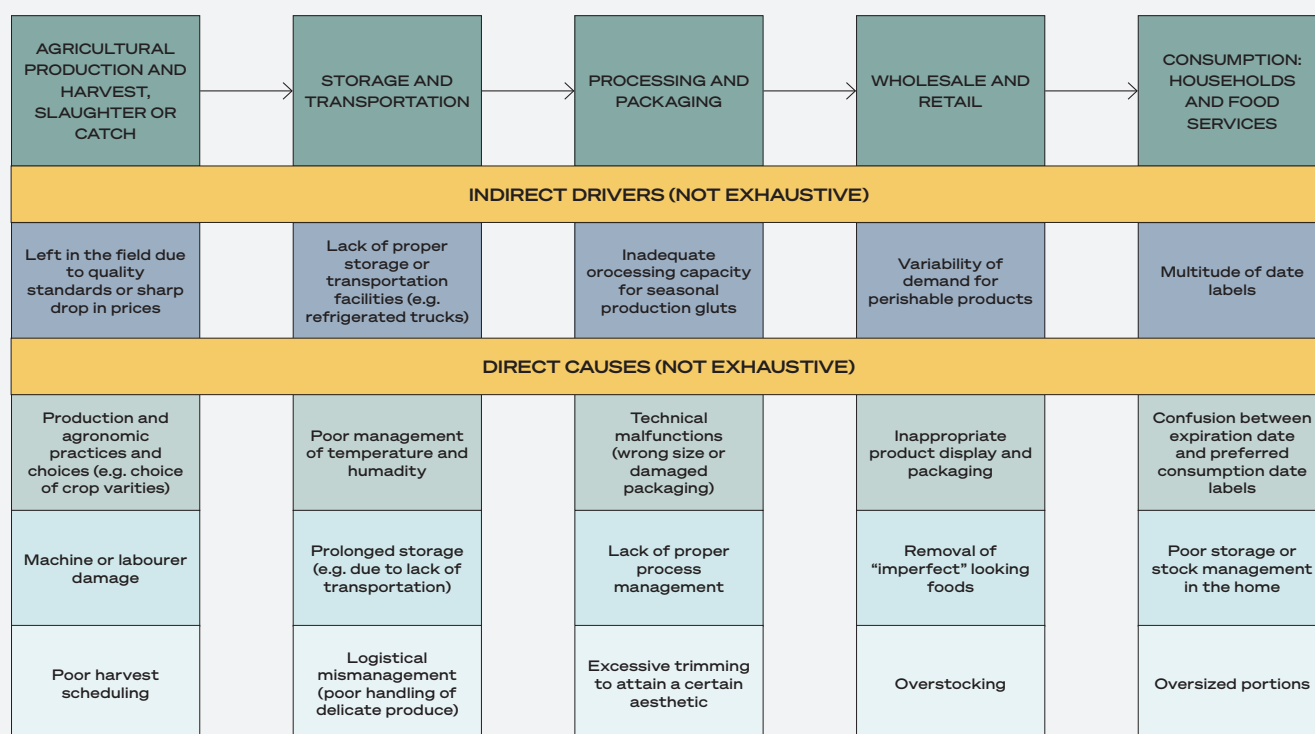


Figure 3
Potential direct causes and indirect drivers of FLW

SOURCE: FAO, 2019a. The State of Food and Agriculture 2019. Moving forward on FLW reduction.

GOVERNMENTS ARE A KEY PIECE OF THE PUZZLE

Governments around the world are responding – at various speeds – to FLW by setting targets, through legislation and specific investments. As a first step, many governments have set targets to address FLW aligned with SDG 12.3. These include European Union countries, China, Japan, Australia, the United Arab Emirates and the United States of America (Flanagan *et al.*, 2019). In Africa, African Union members set, as part of the 2014 Malabo Declaration, a target of reducing post-harvest losses by 50 percent by 2025. However, progress towards the Malabo Declaration target has been piecemeal, with the latest AU review suggesting that the region is not on track to meet this target (AU, 2018). Middle-income countries such as Mexico (AU and WRAP, 2019) are also taking steps to develop national strategies to reduce FLW.

Progress in setting government targets has been matched by increasing national initiatives and legislation to advance the circular economy and tackle FLW. Thanks to the revised EU waste legislation, adopted in May 2018 as part of the Circular Economy Action Plan, the European Union has introduced specific measures on food waste prevention that will provide new and consistent data on food waste levels (EC, 2019). In addition, in its new 'Farm to Fork' strategy, a key element of the European Green Deal, the European Union will pursue and step up its action to prevent FLW for sustainable food along the entire food value chain (EC, 2019). While legislation and national level initiatives demonstrate a clear expression of intent and awareness, it is too early to assess their impacts.



PRIVATE SECTOR GAINING MOMENTUM

The FLW agenda is acquiring momentum in the private sector. Sixty percent of the world's 50 largest food businesses (by revenue), including agrifood companies, retailers, and large food cooperatives have set, or participate in programs that have set, a FLW reduction target consistent with SDG 12.3 (Flanagan et al., 2018). Beyond setting targets, about 20 percent of these companies are also implementing FLW reduction programs (Flanagan et al., 2018). Through these programs, companies also share some of the inventory risks with suppliers. Business networks, such as The Consumer Goods Forum, Global Agri-business Alliance, the World Business Council for Sustainable Development (WBCSD), and the Food Reform for Sustainability Health (FReSH) program, play an important role in setting targets, providing information and sharing best practices.¹ Nonetheless, most of these companies are food retailers and manufacturers in North America and Europe, meaning that there is a need to involve companies and suppliers working across other parts of the food supply chain and in other regions.

Awareness of the business case for FLW reduction is driving this momentum. Research by the Champions 12.3 coalition across 17 countries and 700 companies indicates that there is a strong business case for private businesses to reduce FLW. In many cases, the marginal benefits of eliminating losses outweigh the costs of interventions. Ninety-nine percent of companies included in the analysis earned a positive return on investment, with a median 14-fold financial return on investment (Hanson and Mitchell, 2017). The payback period for some of these investments is very short; for example, in Turkey, investments in technologies for live tracking of cold chain conditions of cherry exports had a payback period of only 2 months.

Beyond the business case, there is an increased regulatory scrutiny such as in the case of the European Union where it is being driven by the adoption of a sustainable finance package in 2021 that will raise the

importance of reporting on environmental social and governance issues. This means that ESG reporting for food retailers operating in the EU market is no longer optional. It is likely to become mandatory within the next two years. The European Union has clearly recognized that effective corporate ESG integration is vital for risk management as countries move towards net zero economies. It is also essential for unlocking new business opportunities. It will be critical for companies, especially in the European Union and EU accession countries, to start developing their disclosure frameworks in the coming years – including on FLW.

While private sector responses show promise, their full potential will only be unleashed if the right public sector interventions are in place. Public interventions reduce some of the barriers that prevent producers and consumers from reducing FLW, for example by generating and/or sharing information on how to reduce FLW. In addition, public interventions can help share risks more efficiently along agrifood system players, and thereby curb waste that results from inefficient risk sharing between actors (for example food processing companies and suppliers). They can also take into account negative externalities, particularly environmental impacts, which private sector actors are often unable to identify. Governments also have a role to play in regulating unfair trade practices (UTPs)² and thereby reducing FLW at the supplier level. For example, Germany applies the EU's Unfair Terms Directive (Council Directive 93/13/EEC on unfair terms in consumer contracts) to business-to-business transactions, to ensure that retailers cannot unduly and excessively delay payments to suppliers, thereby also reducing FLW (Renda et al., 2014) (Glöckner, 2017). Public intervention – including infrastructure, financial incentives and regulations – enables private sector responses and helps to target private action along a value chain and across geographic locations, to manage unintended consequences and take into account externalities.

¹ For example, see the recent CEO Guide to Food System Transformation launched by the World Business Council for Sustainable Development (WBCSD) which identifies FLW minimization as a key area for businesses to accelerate food system transformation.

² Unfair trade practices (UTPs) are defined as practices that grossly deviate from good commercial conduct, are contrary to good faith and fair dealing and are unilaterally imposed by one trading partner on another (EC, 2014).



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DEVELOPMENT BANKS STEP UP ENGAGEMENT IN FLW

Over the last decade, development banks have stepped up efforts to fight FLW. Various initiatives indicate there is substantial diversity in the size and modality of support to FLW reduction across development banks. Different divisions within the various institutions are tasked with taking the lead on FLW. In part, this is a result of the nature of the FLW problem, which requires often multiple interventions at different stages in food systems, and ample coordination between many national and local level public and private actors. It is also the result of the several technical and institutional challenges that need to be addressed when reducing FLW. For example, interventions can simultaneously include investments in efficient storage infrastructure tailored to a specific supply chain (which can require private and public investments), supporting adoption of new legislation on food donations, increasing municipal waste management capacity and developing consumer awareness campaigns. The nature of such problems and the associated stakeholders necessarily relate to the mandates of several units and structures within development banks.

As a result, development banks have often focused on broader goals which have knock-on effects on FLW (e.g. rural infrastructure, electrification, greening) rather than specific and dedicated projects with a narrow focus on FLW. Interventions and investments have been integrated into broader public lending programmes that are not exclusively dealing with the topic or added to private sector lending projects through technical assistance. Very often FLW reduction elements support the rationale for public and private lending particularly through the perceived environmental benefits. Finally, while agricultural and agribusiness units have an important lead role in FLW reduction within development banks, that mandate is not always clear and unequivocal: unsurprisingly FLW responsibilities are found to be anchored in very different technical and managerial units across development banks. Few organizations have standalone teams or dedicated experts specializing in FLW who could help create projects focused directly on reducing it. As a result, there are often no clear champions on the FLW theme within these institutions.

Broadly, development banks' engagement has relied on three main fronts: (i) advocacy, (ii) grants for technical assistance on improving policies, data and knowledge transfer and (iii) lending activities (focusing on infrastructure with both public and private stakeholders but which may also include policy and other knowledge elements). On advocacy, they have used their convening power to raise awareness and motivate action among a range of stakeholders, including civil society, private sector and governments. Second, they have provided technical assistance and policy support to facilitate data collection and analysis, develop guidelines and build capacity through dissemination of best international practices. On lending, development banks have typically included FLW reduction

as components or features of larger projects aimed at enhancing rural infrastructure, access to markets and logistics, and information. As summarised below, FLW reduction has typically been included in programmes aimed at upgrading rural market facilities. This includes improving cold storage facilities, as well as deploying climate-smart processing, storage and packaging, and utilizing handling technologies to reduce losses and add more value. Investments have also been targeted at enhancing information for supply chain management, strengthening harvesting, storage and handling, and enhancing logistics techniques and capacity. Some examples of these interventions are provided below.

EXAMPLES OF INVESTMENTS

1

In 2018, the Inter-American Development Bank (IDB) launched #SINDESPERDICIO, a platform that promotes knowledge and innovation sharing across government, business and civil society working to fight FLW in Latin America (IDB, 2018). The platform was able to attract important corporate partners alongside technical international agencies and civil society. The platform tackles four areas: (i) national and local policies, (ii) knowledge generation, (iii) support to innovative projects, (iv) responsible consumer habits. Early results show that #SINDESPERDICIO created competitive awards through the IDB's innovation lab that provided grants and technical

support to start-ups addressing FLW issues in Mexico, Colombia and Argentina. Companies which benefit from these funds address FLW problems in very different ways across food systems. This includes the implementation of digital marketplaces and blockchain technologies to increase efficiency of food transactions and marketing possibilities, as well as post-harvest and processing technologies that increase food durability. Another approach is to promote service-providers – that assist farmers in selling their produce – as well as innovative logistics services, and infrastructure for reducing losses during transportation and storage.

2

The World Bank is currently providing an estimated USD 4.6 billion to support countries in addressing FLW (World Bank, 2019a). A share of these investments was financed through sustainable development bonds (see section below), of which the World Bank issued USD 2 billion in 2019 specifically to raise awareness around FLW (World Bank, 2019b). The World Bank also administered a Multi-Donor Trust Fund for Sustainable Logistics (MDTF-SL), which funded technical assistance and capacity building

activities for a value of at least USD 2.7 million, with a focus on combating food loss through reducing logistics costs and greening supply chains (World Bank, 2015). The World Bank's efforts are underpinned by a comprehensive analytical agenda aimed at formulating country-specific diagnostics that track FLW from field to landfill and guide design of investment operations (World Bank and WRAP, 2019).

3

Between 2013 and 2016, the **International Fund for Agricultural Development (IFAD)** approved the disbursement of at least USD 433 million in loans (12 per cent of total disbursement) for upgrading post-harvest infrastructure, equipment and capacities to minimize food losses along food supply chains, mostly in Sub-Saharan Africa (IFAD, 2019a). Most food loss reduction activities are

part of larger projects to upgrade rural infrastructure, (including roads, collection centres, storage warehouses, and processing and packaging facilities) agricultural value chains, and access to inputs through rural finance. Only one project in Rwanda focusses specifically on post-harvest loss reduction (IFAD, 2019b).

4

In accordance with its Agribusiness Strategy (2019–2023) and its Green Economy Transition Approach (2021–2025) GET 2.1, the **European Bank for Reconstruction and Development (EBRD)** engaged in FLW reduction through technical cooperation, business fora and finance (EBRD, 2021). In 2020 EBRD published Food Loss and Waste Guidelines for Greece (EBRD, 2019a) and Turkey (EBRD, 2019b), which identify and promote policies, regulatory measures and business practices that can have a positive impact on prevention, reduction and management of FLW at supply and retail levels. Recently, EBRD published a roadmap for food retailers, which maps out key areas for FLW action and investment and provides information on potential ways to tackle food waste (e.g. improving governance, setting targets and developing strategies, or working with suppliers on broader sustainability targets). Since 2016, EBRD has hosted a Circular Economy platform in Turkey to promote the active engagement of industrial companies with waste minimisation practices. As of June 2020, more than 100 companies have become members of the Circular Economy platform. Since 2018, the EBRD has run a dedicated Technical Assistance programme called ‘Circular Vouchers’, with the aim to support companies in

identifying viable circular investments. This includes promoting technological options available to introduce alternative raw materials into the production process (and/or transforming by-products), adopting circular business models and introducing circular elements in their governance model. In addition to these enabling environment support activities, the EBRD has focused on supporting transition in its countries of operation with high impact projects directly with the private sector. For example, EBRD approved a USD 10 million loan to support the construction of a warehouse with an automated management system for Uzbekistan’s largest leading juice producer (EBRD, 2017). In its Agribusiness Strategy, EBRD committed to further increase its support to policy activities and investments in food and agriculture, to boost sustainability across supply chains. The EBRD intends to deepen engagement with existing clients through promoting innovations such as digitalisation and traceability improvements along the supply chain (e.g. through blockchain technology). The EBRD intends to deploy a broad range of EBRD financing products to achieve its objective, including working capital, non-sovereign and sovereign operations, and venture capital funds.

5

One of the pillars of the **International Finance Corporation’s (IFC)** climate smart agriculture strategy has been the reduction of food losses in the agriculture sector. The IFC has focused on food losses because of its importance in developing countries, concentrating efforts on the links between food losses and GHG emissions. Globally food losses related investments have accounted for around USD 200 to USD 300 million annually since 2017. Like other financing institutions, many of the investments are not solely focussed on FLW. Many investments target other sustainability aspects, with food loss considerations added

to the project. IFC has invested in equipment and infrastructure, such as cold storage and silos in rural areas. In addition, through venture capital type finances, IFC has sought to develop small companies whose business model is mainly focused on FLW reduction. Finally, warehouse financial products (through the USD 500 million Global Warehouse Finance Program launched in 2010, which optimizes commercialization of produce by smallholders) have been linked with technical assistance to help reduce post-harvest losses.

Beyond development banks, other development partners have also provided technical assistance, grants and funding for early-stage innovation and technology development. Institutions such as the Bill & Melinda Gates Foundation, the Rockefeller Foundation, the United States Agency for International Development (USAID), UK Aid, the European Food Banks Federation and many UN agencies – including FAO and World Food Programme (WFP) – have invested in the early stage development of technology including in companies pursuing research and development of

technologies to reduce FLW, such as hermetic bags for cereal storage, improved crates for transporting tomatoes and better fish processing technologies (FAO, 2019a). Investment has also focussed on initiatives to accelerate action and mobilize private sector financing, such as the FLAWLESS partnership supported by the Partnering for Green Growth and the Global Goals 2030 (P4G) initiative. This type of non-commercial funding has been key in the early stages of research, development, and deployment of new technologies.



SUSTAINABLE FINANCE IS ON THE RISE

Sustainable financing mechanisms are increasingly being used to deliver social and environmental sustainability. Green, sustainability and sustainable development bond issuances, the proceeds of which are used for projects that have a positive impact on the environment, are increasing worldwide. These bonds allow firms and governments to raise finance for projects that enhance climate resilience, sustainable land use, biodiversity and clean water, among other objectives. These bonds are important, as they attract additional private capital to finance the global sustainability agenda. Compared to green bonds, sustainability and sustainable development bonds also have a social dimension; they are used to finance projects expected to provide both environmental and social benefits. Sustainable finance is backed by policy initiatives including the European Commission's policy agenda on sustainable finance since 2018 or the Sustainable Stock Exchanges Initiative (SSE) action plan to grow green finance.

Sustainability bonds are being deployed to target FLW. On one hand, development banks such as the World Bank have issued sustainability bonds to fight FLW. On the other hand, businesses are reaffirming the importance of FLW reduction in their corporate strategies, including FLW criteria in their investment strategies. For example, the Dutch food retail company Ahold Delhaize developed a Sustainability Bond Framework under which it intends to

issue sustainability bonds and use the proceeds to finance/refinance, in whole or in part, existing/future projects that contribute to reduce waste (Sustainalytics, 2019).

Sustainability-linked loans are also on the rise. These loans connect interest rates to the borrower's FLW performance, so that if FLW is reduced (performance increases), interest rates go down. Sustainability loans are increasingly being adopted in the FLW reduction landscape. For example, in 2019 Sodexo renewed its EUR 1.3 billion revolving credit facility (RFC) – a type of corporate loan – to include a pricing adjustment based on its performance towards the goal to prevent 50 percent of the food waste and food losses in its operations by 2025 (Sodexo, 2019). Similarly, Louis Dreyfus Company (LDC), a leading merchant and processor of agricultural goods, included sustainability-linked pricing in its USD 750 million RCF, with an interest rate margin reduction for each year in which the company improves its sustainability performance, including a solid waste sent to landfill indicator (LDC, 2019). Regulatory organizations and trade associations are stepping-up their engagement in this complex landscape and have started to provide frameworks to guide action. For example, the International Capital Market Association (ICMA) now provides recommendations for impact reporting for waste management and resource efficiency projects (Green Bond Principles, 2018).



Five action areas for development banks

The COVID-19 pandemic has highlighted that action on FLW is more urgent than ever before. The previous section demonstrates that in the last few years, governments, businesses and development banks have significantly expanded their analytical work and investments in this area. These actions show promise, but they need to continue to address the challenges posed by FLW, and keep up with the rapid growth in technologies and financial instruments available to combat this issue and match the ambition of the SDG and circular economy agendas in the longer term. There is a business case for addressing FLW, but there is an even stronger rationale for public interventions to reduce some of the barriers that prevent producers and consumers from reducing FLW. A Champions 12.3 study analysed data from more than 1000 food business and found that 99 percent saw a net financial benefit from FLW reduction projects, with a median financial benefit of USD 14 for every USD 1 invested (EBRD, 2019a). Development banks can support public and private interventions. In this context we propose five actions for development banks to continue

supporting global efforts to reduce FLW. In pursuing these entry points development banks will need to work closely with governments and the private sector. Development banks will have to seek close coordination with governments to tackle FLW and promote reform efforts. In addition, given the importance of private business in the FLW landscape, demand for financing from the private sector is likely to be high. Private sector actors, from large players to start-up companies and small-holder farmers, may require guidance to align their efforts to national and global strategies, and also funding to adopt solutions to minimize FLW. Through project preparation facilities, new financing mechanisms and even specialized funds, development banks can scale-up their support to the private sector. The role of partnerships cannot be understated; development banks will have to collaborate among themselves, and work with coalitions, including specialized international agencies, companies, government agencies and non-governmental organizations.

ACTION AREAS

1

Provide immediate and dedicated assistance to minimize FLW during the COVID-19 pandemic and its aftermath.

2

Support data collection and analytics through innovative technologies.

3

Carry out context specific interventions, considering economies of scale and taking a food systems approach.

4

Attract private sector investment and launch a global or regional facility using blended finance.

5

Create institutional solutions for the FLW reduction agenda.

Provide immediate and dedicated assistance to minimize FLW during the COVID-19 pandemic and its aftermath.

This could include working at multiple levels. A focus on small producers can help reduce post-harvest losses, by bringing collection centres closer to production, and also by giving small producers access to e-commerce to sell their produce. Value chains could be another focus area for immediate action, with investments to keep value chains of perishable products alive (e.g. protective gear for workers involved in supply chains of perishable products). Wholesale markets could also be supported to make them safe and COVID-19 compliant over the short term (e.g. linking them to food banks, changing access procedures) and more modern and adaptable to future shocks over the medium term (FAO, 2020). At the retail level, development banks can work to support legislation and simplification of administrative procedures to facilitate food donations and encourage

retailers and companies to donate surplus food to reach the food insecure and vulnerable. Development banks can work with governments to develop regulatory measures to tackle unfair trade practices, such as delayed payments by retailers to suppliers, which can lead to FLW. They can also provide assistance in developing national or local strategies to tackle FLW. Development banks should continue to work at an advocacy level to promote open sharing of information on food markets and food-related trade measures, to minimize the risk of disruptions to the movement of food. In particular, development banks could consider creating dedicated financial instruments targeting FLW, including through working capital, non-sovereign and sovereign operations, and partnerships with impact and other funds (including blended finance).

Support data collection and analytics through innovative technologies.

Given the dearth of data and knowledge on FLW in many countries, development banks could launch and continue to support major analytical efforts to overcome data deficits, develop national level strategies and lay the foundations for targeted investments, as well as policy reform. Digital technology has a key role to play, ranging from improving efficiencies in supply chains, to encouraging behaviour change among consumers. To collect data, development banks could also start to include FLW in surveys, and experiment with FLW reduction indicators in projects and monitoring and evaluation (M&E) frameworks. Very little

evaluation of FLW reduction actions exists, so including related indicators in M&E frameworks is a first step towards building more evidence of impact, to guide future interventions. To tackle this issue, FAO has recently launched a comprehensive technical platform on the measurement and reduction of FLW. The platform follows the methodological revisions to the global FLW estimates that were part of its flagship publication released in 2019, and provides guidance materials and information on measurement, policies and other interventions to support reduction of FLW.

Carry out context specific interventions, considering economies of scale and taking a food systems approach.

There is no blunt instrument to tackle FLW. The type of intervention will depend on value chains and country contexts. This entails looking at the connections between specific agrifood value chains and related outcomes (e.g. poverty or emissions) prior to designing any intervention, especially those aiming at reducing post-harvest losses (IFC, 2017). In every country, sector and value chain there might be different levels of FLW and different driving factors. Therefore, detailed diagnostic assessments could be used to guide action and decide on the type of interventions. In addition, interventions could consider economies of scale and uneven distribution of benefits, as often only a few

actors in the chains (e.g. farmers, processors or retailers) might reap the benefits of interventions. Investments might include scaling-up lending operations in rural infrastructure and wholesale markets, as well as expanding policy-linked lending to enhance institutional capacity. In order to efficiently implement these interventions, organizations should ensure prioritization of FLW within overall green agendas, as well as adequate organizational expertise in the area. At country level, supporting green agendas can include work on the integration of FLW reduction options in Nationally Determined Contributions (NDCs) to support climate change mitigation efforts.

Attract private sector investment and launch a global or regional facility using blended finance.

Sources of finance for private sector investments in FLW reduction are expanding. They include sustainability-linked loans, sustainable development bonds, private sector foundations and agricultural investment funds. Development banks could further capitalize on this interest from the capital markets and private sector to significantly expand the pool of resources available to address FLW. This could

include launching a global or regional facility that uses first loss capital from donors and targets private sector investments in all stages of the supply chain, especially in emerging economies with clear impact on FLW reduction. In addition, development banks could engage with the private sector to ensure greater awareness and disseminate information around FLW.

Create institutional solutions for the FLW reduction agenda.

To achieve this, development banks could more clearly integrate FLW targets into operations, and build staff skills and capacity and specialist internal teams tasked with integrating FLW issues across all projects, not just agriculture and food security. These teams will play a key role in ensuring that value chain specific knowledge and data acquired through Action 2 guides operations. These institutional solutions could also focus on financing

mechanisms to provide high-risk / non-commercial funding in the early stages of research, development, and deployment of new technologies and business models. In the context of increasing 'greening' of development bank approaches and operations (e.g. EBRD, European Investment Bank [EIB]), the environmental benefits of reducing FLW should be a key argument to support and justify the institutional changes required to move this agenda forward.





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Abbreviations and acronyms

AU	African Union	LDC	Louis Dreyfus Company
CFP	carbon footprint	M&E	monitoring and evaluation
EBRD	European Bank for Reconstruction and Development	MDTF-SL	Multi-Donor Trust Fund for Sustainable Logistics
EC	European Commission	P4G	Partnering for Green Growth and the Global Goals 2030
EIB	European Investment Bank	RCF	revolving credit facility
FLW	food loss and waste	SDG	Sustainable Development Goals
FReSH	Food Reform for Sustainability Health	SSE	Sustainable Stock Exchanges Initiative
GET 2.1	Green Economy Transition Approach (2021-2025)	USAID	United States Agency for International Development
GHG	greenhouse gas	UTP	unfair trade practice
ICMA	International Capital Market Association	WBCSD	World Business Council for Sustainable Development
IFAD	International Fund for Agricultural Development	WFP	World Food Programme
IFC	International Finance Corporation		